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The research of thermal processes of the automobile chassis

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Abstract

© TJPRC Pvt. Ltd. In this work some, the results of studying of the working processes of the automobile knots relating to the system of the chassis are offered. Features of operation of cardan transfer, the main transfer, differential and half shafts of the truck in difficult climatic conditions are in details considered. An assessment of the extent of influence of low temperatures of air on technical condition, durability and non-failure operation of work of knots of transmission is given. The factors defining a role of lubricants at change of service conditions in winter time are studied. The systematic approach, allowing revealing the communications essential to assessment of efficiency of operation is the basis for the conducted research. The natural and technical system, including the car, the road and the environment is the difficult object demanding a stage-by-stage research. Results of road tests of the trucks operated in various climatic conditions form a basis for such research. Reliable assessment of thermal balance of knots of the car is possible at accurate accounting of the modes of the movement of the car and loading of knots. The monitoring of a temperature condition of knots which is carried out in operation time allows establishing the rising temperature gradients in various directions. The obtained data form a basis for the transition from the medium-volume, temperature of knot to a set of temperatures in the set nodal points.

Keywords

Car, Cardan transfer & working temperature, Chassis, Engine, Leading axle, Transmission

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